Illnesses and Injuries Reported by California Physicians[1] Associated With[2] Pesticide Exposure Summarized by Pesticide(s) and Type of Illness 2009

Pesticide[3]	Systemic/ Respiratory[4]		Topical[4]		TOTAL	
	Definite/ Probable	Possible	Definite/ Probable	Possible	Definite/ Probable	Possible
Organophosphates						
Acephate	0	1	0	0	0	1
Chlorpyrifos	6	7	0	0	6	7
Diazinon	1	2	0	0	1	2
Malathion	1	8	0	1	1	9
Naled	1	0	0	0	1	0
N-Methyl Carbamates						
Aldicarb	0	1	0	0	0	1
Carbaryl	1	0	2	0	3	0
Methomyl	0	1	0	0	0	1
Pyrethrins and Pyrethroids						
Beta-Cyfluthrin	1	3	2	1	3	4
Bifenthrin	4	3	1	0	5	3
Cyfluthrin	0	0	1	0	1	0
Cypermethrin	9	4	0	2	9	6
Deltamethrin	0	1	1	0	1	1
Esfenvalerate	0	1	0	0	0	1
Gamma-Cyhalothrin	0	0	0	1	0	1
Lambda-Cyhalothrin	2	3	2	2	4	5
Permethrin	1	2	1	2	2	4
Tralomethrin	2	0	0	0	2	0
Other Pesticides						
Acequinocyl	0	0	0	1	0	1
Acetamiprid	0	0	0	2	0	2
Adjuvant	0	0	1	1	1	1
Aluminum Phosphide	1	1	0	0	1	1
Arsenic Trioxide	0	1	0	0	0	1
Boric Acid	1	2	0	0	1	2
Brodifacoum	0	2	0	0	0	2
Bromadiolone	0	1	0	0	0	1
Calcium Hydroxide	1	0	0	0	1	0
Calcium Hypochlorite	9	1	7	0	16	1
Capsaicin	0	0	1	0	1	0
Chlorine	2	0	1	1	3	1

Pesticide[3]	Systemic/ Respiratory[4]		Topical[4]		TOTAL	
	Definite/ Probable	Possible	Definite/ Probable	Possible	Definite/ Probable	Possible
Chlorine Dioxide	4	0	0	0	4	0
Chloropicrin	3	0	0	0	3	0
Copper Naphthenate	0	2	0	0	0	2
Cyanuric Acid	6	0	6	0	12	0
Deet	1	0	3	0	4	0
Dichlobenil	0	0	1	0	1	0
Diphacinone	1	0	0	0	1	0
Eptc	0	1	0	0	0	1
Ethofumesate	1	0	0	0	1	0
Etoxazole	0	1	0	0	0	1
Formaldehyde	0	0	1	0	1	0
Glufosinate-Ammonium	0	0	1	0	1	0
Glutaraldehyde	5	0	6	2	11	2
Glyphosate	3	1	7	3	10	4
Halogenated Hydantoins	1	0	0	0	1	0
Hydramethylnon	1	1	0	0	1	1
Hydrogen Chloride	2	0	3	0	5	0
Hydrogen Peroxide	0	0	1	0	1	0
Imidacloprid	0	0	1	1	1	1
Indoxacarb	0	0	0	1	0	1
Lepidopteran Pheromones, NOS	0	1	0	0	0	1
Lithium Hypochlorite	1	0	0	0	1	0
Metaldehyde	1	0	0	0	1	0
Metam-sodium	0	0	1	0	1	0
Methoxyfenozide	1	0	0	0	1	0
Metolachlor	0	0	0	1	0	1
Mineral Oil	0	0	1	0	1	0
Oxyfluorfen	1	0	0	0	1	0
Ozone	1	0	0	0	1	0
Para-Dichlorobenzene	1	9	0	0	1	9
Paraquat	1	1	0	0	1	1
Pendimethalin	0	1	0	0	0	1
Pentachlorophenol	0	0	0	1	0	1
Phenolic Disinfectants	0	0	1	0	1	0
Phthalaldehyde	1	0	1	0	2	0
Pine Oil	4	2	0	0	4	2
Quaternary Ammonia	5	6	49	10	54	16
Sethoxydim	0	0	1	0	1	0
Sodium Bromide	1	0	0	0	1	0

Pesticide[3]	Systemic/ Respiratory[4]		Topical[4]		TOTAL	
	Definite/ Probable	Possible	Definite/ Probable	Possible	Definite/ Probable	Possible
Sodium Chloride	1	0	0	0	1	0
Sodium Hypochlorite	51	15	66	7	117	22
Spinosad	0	0	1	0	1	0
Strychnine	3	1	0	0	3	1
Sulfur	1	2	2	2	3	4
Sulfur Dioxide	2	0	1	0	3	0
Sulfuryl Fluoride	1	3	0	0	1	3
Thiabendazole	0	1	0	0	0	1
Triclopyr	0	1	0	1	0	2
Trifloxystrobin	0	1	0	0	0	1
Zinc Naphthenate	0	1	0	0	0	1
Combinations of Antimicrobials	37	15	21	2	58	17
Combinations of Fumigants	8	1	2	0	10	1
Combinations of Fungicides	10	6	5	0	15	6
Combinations of Herbicides	6	9	6	3	12	12
Combinations of Insecticides Including ChE Inhibitor(s)	4	3	2	0	6	3
Combinations of Insecticides Without ChE Inhibitor(s)	123	31	23	7	146	38
Miscellaneous Combinations	29	13	4	3	33	16
Unknown Antimicrobials	14	10	4	4	18	14
Unknown Herbicides	1	0	0	1	1	1
Unknown Insecticides	15	11	5	2	20	13
Unknown Pesticides	9	5	2	1	11	6
TOTAL	**404**	**200**	**248**	**66**	**652**	**266**

[1] **Source:** California Department of Pesticide Regulation, Pesticide Illness Surveillance Program.

[2] **Associated With:** Includes cases classified as definitely, probably or possibly related to pesticide exposure

Definite : High degree of correlation between pattern of exposure and resulting symptomatology. Requires both medical evidence (such as measured cholinesterase inhibition, positive allergy tests, characteristic signs observed by medical professional) and physical evidence of exposure (environmental and/or biological samples, exposure history) to support the conclusions.

Probable : Relatively high degree of correlation exists between the pattern of exposure and the resulting symptomatology. Either medical or physical evidence is inconclusive or unavailable.

Possible : Health effects correspond generally to the reported exposure, but evidence is not available to support a relationship.

[3] **Type of Pesticide:** Pesticides listed on this table are grouped according to frequent inquiries received by DPR. Other pesticides are then listed in alphabetical order.

[4] **Type of Illness:** Categorization of the type of symptoms experienced.

Systemic	:	Any health effects not limited to the skin and/or eye. Cases involving multiple illness symptom types including systemic symptoms are included in the systemic category.
Respiratory	:	Health effects involving any part of the respiratory tree.
Topical	:	Health effects involving only the eyes and/or skin. This excludes outward physical signs (miosis and lacrimation) related to effects on internal bodily systems. These signs are classified under 'Systemic.'

Whom to Contact:

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About the Pesticide Illness Surveillance Program Data

Pesticide-related illnesses have been tracked within the state of California for more than 50 years. The California Environmental Protection Agency, Department of Pesticide Regulation (DPR) maintains a surveillance program which records human health effects of pesticide exposure. The Pesticide Illness Surveillance Program (PISP) documents information on adverse effects from pesticide products, whether elicited by the active ingredients, inert ingredients, impurities, or breakdown products. This program maintains a database, which is utilized for evaluating the circumstances of pesticide exposures resulting in illness. This database is consulted regularly by staff who evaluate(s) the effectiveness of the DPR pesticide safety programs and recommend changes when appropriate.